

**EPA Incorporation of DEQ Technical Comments submitted January 26, 2018
Pre-RD Surface Sediment Field Sampling Plan (FSP) dated January 17, 2018
Portland Harbor Superfund Site**

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Comment	How incorporated in EPA comments
1. The SS FSP indicates the Downtown Reach and the Upriver Reach (D/U) surface sediment will be compared with Site concentrations, but does not describe how that comparison will be conducted (e.g., will surface weighted average concentrations be compared? Will an upper prediction limit be developed?). The SS FSP describes targeted sample collection in areas within select grain size and total organic carbon (TOC) criteria. This biased sample collection scheme will result in generation of data that may or may not be useful or appropriate for comparison with Site data, depending on how the data comparison is conducted. In any event, DEQ recommends that no data analysis or interpretation is submitted until EPA and Partners have had an opportunity to review and provide input on the interpretative methods.	This comment is addressed by EPA Primary Comment 7.
2. Section 1.2 <i>Project Overview</i> indicates "Additional surface sediment samples may be collected to reoccupy 2004 RI surface sediment locations. If this reoccupation of 2004 RI sampling activity was to occur, the same protocols would be followed outlined in this FSP and the description of the sampling activities would be developed as an addendum to this FSP." Similarly, QAPP Section 4.1.2 <i>Surface Sediment Sampling</i> also states that "Additional samples may be added to the current scope of work, with the purpose of re-occupying old 2004 surface sediment stations". DEQ assumes sample locations would be identified in the addendum and that it would be submitted for EPA and Partner review and comment before samples are collected.	This comment is addressed by EPA Primary Comment 5.
3. Section 2.1.4 <i>Pre-Screening D/U Sediments for Grain Size and TOC</i> summarizes grain size and TOC information for the Site that is at times confusing and difficult to follow. In this section it will be helpful to: 1) clarify what is meant by "upriver", e.g., is this the D/U Reach combined or the Downtown Reach or the Upriver Reach; 2) elaborate on how the TOC distribution in the Downtown Reach appears to be different from the upper reaches; and 3) provide descriptive statistics for the Upriver Reach and Downtown Reach separately along with a discussion of	The Downtown Reach and the Upriver Reach are defined in Section 1.1, and Section 2.1.3 states that 30 samples will be collected from each reach. However, further details in this comment are addressed by EPA Primary Comment 7.

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<p>the spatial distribution of sediment types (given the statement that the grain size and TOC in these reaches are different from one another).</p> <p>Additionally, comments on the D/U surface sediment collection criteria are as follows:</p> <ul style="list-style-type: none"> • The SS FSP indicates that areas containing more than 35 percent fines will be sampled, but provides no rationale, nor do previous paragraphs in the section provide average, median, or ranges of Site percent fines (as they do for organic carbon and grain size distribution). A rationale for selecting this percentage would be useful to support future comparative analyses. • The TOC target range criteria indicates that if TOC is greater than 8 percent, then site conditions will be evaluated before accepting the sample. DEQ recommends evaluating site conditions if TOC is greater than 3.5 percent, consistent with the upper range of what is considered normal in freshwater systems. • The target range criteria for grain size fraction includes presence of clay. The rationale for requiring the presence of clay to select a D/U sample for analysis will need to be explained, given that, according to Section 2.1.4 of the SSFSP, the Site mean grain size distribution is classified as sandy silt. 	
<p>4. Section 2.1.4 <i>Data Evaluation and Analysis</i> indicates, with respect to meeting TOC and grain size criteria for sample collection in the last two sentences: “In the event that a sample(s) is not within the acceptable range (both components are important), these sample location(s) will not be analyzed without further discussion with the Pre-RD AOC Group and EPA”, and “A sample may be analyzed if it is above the minimum TOC requirement, or below the maximum, or an alternate station may be selected in the field and resamples.” These two sentences appear to be contradictory. DEQ recommends resolving the protocol for collecting samples that are not within the range of criteria.</p>	<p>This comment is addressed by EPA Primary Comment 7.</p>
<p>5. QAPP Section 4.1.2 <i>Surface Sediment Sampling</i> states “It is expected that any newly collected surface sediment sample, if collected within a</p>	<p>EPA agrees with this comment, but the comment is more appropriate for the PDI QAPP than the Surface Sediment</p>

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<p>reasonable distance of an older sample, would replace the older data for the purposes of SMA refinement. . .". DEQ does not support replacement of older sample data with newer data on a point-by-point basis without additional evaluation and EPA and Partner consultation. While the newer data may be more representative of current in-situ conditions than historical data, this should be explicitly determined through a lines of evidence approach before eliminating older data for use in SMA delineation. This lines of evidence evaluation could consider, for example: distance between data points (including accommodating for uncertainty in location accuracy); bathymetric change between sampling events; evaluation of nearby results and identifying any anomalous measurements; differences in physical parameters such as grain size and total organic carbon between old and new samples. DEQ recommends that historical and new data points are submitted and used, initially, in maps and geostatistics. At the time of this initial submission, a proposal can be made to EPA and partners as to which historical data points should be superseded by more recent data and should therefore not be used for SMA delineation.</p>	<p>FSP. This comment has been included as EPA Primary Comment 25 in the PDI QAPP comment set.</p>